

Features

- Designed for 12V agricultural equipment
- 8,75Nm, 100 rpm @ output shaft
- Rugged anti-corrosion aluminum housing
- Slim design (85mm total width to fit the application requirements)
- CANOpen communication (speed and position control)
- Integrated low power DC-motor drive to control small actuator (eg. automatic seed singulator)
- 2 application specific digital inputs (Seed counting and Seed singulator position)



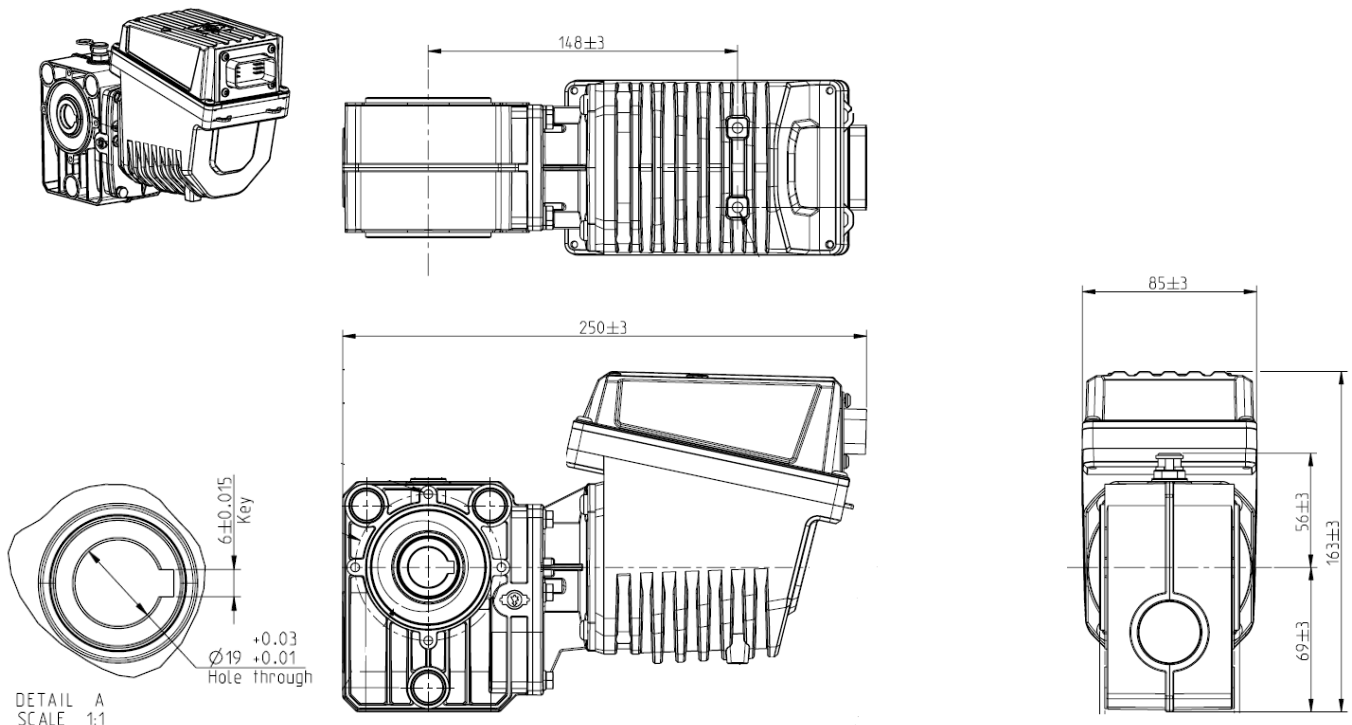
Applications

The DMD0 (P/N1406.601) is an application specific brushless motor with integrated orthogonal gearbox and electronic drive. The motor can be used to replace mechanical or hydraulics transmissions in agricultural or other off-highway applications (e.g. variable rate applications).

Application example are:

- Actuation of seeding element in pneumatic precision planting machines
- Actuation of seed distributor in air-drills or small grain planters
- Actuation of fertilizer and microgranular spreaders in agricultural machines
- Salt, fertilizer, grain spreaders

Overall dimensions



Dimensions in mm.

Mechanical Specifications

Nominal Torque at output shaft	8,75Nm
Peak Torque at output shaft	19Nm (single pulse, duration 500ms) 12Nm (repetitive, duration 500ms, every 5 second)
Nominal Speed at output shaft	100 rpm

Environmental Specifications

Operational Temperature:	-10°C...+60°C (full specs) -10°C...+70°C (derated)
Storage Temperature:	-40°C...+105°C
IP grade	IP6K5 / IPX9K according to ISO-20653.
Vibrations	Sinusoidal vibration test: IEC 600-68-2-6 Random vibration test: IEC 600-68-2-64 Temperature change test: IEC 60068-2-14 Shock test: IEC 600-68-2-27

Electrical Specifications

EMC	The unit fulfills EN ISO 14982: 2000 standard (Agricultural and forestry machinery)
Supply voltage	11-16V Note: Voltage is intended at MD connector input pins. Voltage drop due to cable harness shall be taken into account.
Supply current	19 A at the following conditions Torque: Nominal Speed: Nominal Supply Voltage: Min

Input/output and communication

CAN	1 CAN bus line (compliant ISO SO 11898-2 and 5. Up to 1 Mbit/s)
Seed sensor interface	3 pin (8V – 80mA supply, GND, signal)
Seed selector interface (incremental position sensor and low power DC motor drive)	Full-bridge PWM output. 300mA max continuous current. 3 pin sensor input (8V – 80mA supply, GND, signal)
Safety switch input	Contact switch input to remove supply to power stage.

Connector pin-out

Motor connector matches with CINCH 5810118023, with the following pinning.

A1	SEED_POWER (+8V)	C1	SEED_SENSOR_CNT	E1	SEED_SELECT_CNT
A2	CAN_L	C2	SEED_SELECT_MOTOR+	E2	SEED_POWER (+8V)
A3	CAN_H	C3	SEED_SELECT_MOTOR-	E3	MOTOR_ENABLE_IN
B1	GND	D1	BAT-	F1	BAT+
B2	CAN_L	D2	BAT-	F2	BAT+
B3	CAN_H	D3	GND	F3	MOTOR_ENABLE_OUT

Disclaimer

The present specifications are intended to be preliminary. Parameters and values indicated in the document might be subjected to changes. For further information, please contact: mechatronics@roj.com